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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/082,186

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Akira Kimura

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11/08/2005

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WASHINGTON, DC 20036

EXAMINER

SCHUBERT, KEVIN R

ART UNIT

PAPER NUMBER

2137

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/082,186	KIMURA, AKIRA	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kevin Schubert	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 35-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 and 35-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>06132002</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

Claims 1-24 and 35-46 have been considered.

#### *Election/Restrictions*

5            Claims 25-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/5/05.

#### *Claim Objections*

10           Claims 5,17, and 38 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

15           Claim 1 is objected to because of the following informalities: the examiner sees no need for the word "and" in part i) in the phrase ", **and** the encrypted second identification information received through said second communication means". Appropriate correction is required.

20           Claims 4 and 16 objected to because of the following informalities: the phrase "information by said service user" is problematic. The examiner suggests "information **of** said user" or "information **from** said user". Appropriate correction is required.

            Claim 35 is objected to because of the following informalities: in part a, it is unclear what the phrase "pre-stored therein" modifies. Appropriate correction is required.

25

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5           Claims 1-24 and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 13, and 46 recite the following vague and indefinite limitation: "encryption key generating information generating means for generating said encryption key generating information". More specifically, the phrase "encryption key generating information" is problematic and nebulous. The  
10   examiner has considered, for examination purposes, the phrase "encryption key generating information" to mean "encryption key information". Appropriate correction is required.

          Claims 1-24 and 46 are rejected under 35 U.S.C. 112, second paragraph. The claims recite the limitation "the second identification information". For example, claim 1 recites this limitation in part b.  
15   There is insufficient antecedent basis for this limitation in the claims.

          Claims 1-24 and 46 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, for example, the applicant claims encrypting based on "preset encryption key  
20   generating information" in part c. In part f, however, the applicant claims means for "generating said encryption key generating information". It is unclear whether the encryption key generating information is preset, as disclosed in part c, or not preset, as disclosed in part f. Appropriate correction is required.

          Claims 4 and 16 recites the limitation "the use information" in part b. There is insufficient  
25   antecedent basis for this limitation in the claim.

          Claims 9 and 21 recites the limitation "said transient storage means". There is insufficient antecedent basis for this limitation in the claim.

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Claims 3 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation includes "a random number made up by a preset number of letters". This limitation is implausible. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

10 A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

20 Claims 35 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Tello, U.S. Patent No. 6,584,444.

As per claims 35 and 36, the applicant describes a portable terminal authenticated by an authentication device with the following limitations which are met by Tello:

25 a) first identification information storage means having the first identification information for discriminating said portable terminal pre-stored therein (Col 2, line 29 to Co 3, line 21; Col 4, lines 39-58);

b) operating means for inputting the second identification information associated with said first identification information (Col 2, line 29 to Col 3, line 21; Col 4, lines 39-58);

c) communication means for communication with said authentication device (Col 2, line 29 to Co 3, line 21; Col 4, lines 39-58);

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d) encrypting means for encrypting the second identification information input by said operating means based on preset encryption key generating information sent over said communication means from said authentication device (Col 2, line 29 to Co 3, line 21; Col 4, lines 39-58).

5

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

10

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15

Claims 1-5 and 13-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Tello in view of Schneier (Schneier, Bruce. Applied Cryptography. 1996. John Wiley & Sons. Pages 170-178).

As per claims 1 and 13, the applicant describes an authentication system with the following limitations which are met by Tello in view of Schneier:

20

a) first identification information storage means having the first identification information pre-stored therein for discriminating said portable terminal (Tello: Col 2, line 29 to Co 3, line 21; Col 4, lines 39-58);

b) operating means for inputting the second identification information associated with said first identification information (Tello: Col 2, line 29 to Co 3, line 21; Col 4, lines 39-58);

25

c) encryption means for encrypting the second identification information input by said operating means based on the preset encryption key generating information (Tello: Col 2, line 29 to Co 3, line 21; Col 4, lines 39-58);

d) first communication means for communication with said authentication device (Tello: Col 2, line 29 to Co 3, line 21; Col 4, lines 39-58);

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e) second identification information storage means for storage of the first identification information and the second identification information (Tello: Col 2, line 29 to Co 3, line 21; Col 4, lines 39-58);

f) encryption key generating information generating means for generating said encryption key generating information (Schneier: page 173);

5 g) second communication means for communication with said portable terminal (Tello: Col 2, line 29 to Co 3, line 21; Col 4, lines 39-58);

h) comparator authentication means for comparing and authenticating the second identification information encrypted by said encryption means based on said encryption key generating information (Tello: Col 2, line 29 to Co 3, line 21; Col 4, lines 39-58);

10 i) said portable terminal encrypts the second identification information input from said operating means, based on said encryption key generating information received from said authentication device, the so-encrypted second identification information is transmitted through said first communication means to said authentication device, and wherein, in said authentication device, and the encrypted second identification information received through said second communication means and the second  
15 identification information stored by said second identification information storage means are compared to each other based on said encryption key generating information by way of performing the authentication (Tello: Col 2, line 29 to Co 3, line 21; Col 4, lines 39-58).

Tello discloses all the limitations of the above claim, except for key generating means. Schneier discloses key generation means, such as a random-number generator for key generation. It would have  
20 been obvious to one of ordinary skill in the art to combine the ideas of Schneier with Tello because adding means to generate a key increases security for a plurality of reasons, such as allowing for the dynamic creation and use of new keys.

As per claims 2-3 and 14-15, the applicant describes the authentication system of claim 1 (etc),  
25 which is met by Tello in view of Schneier, with the following limitation which is met by Tello in view of Schneier:

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a) decoding means for decoding the second identification information encrypted by said  
encrypting means based on said encryption key generating information (Tello: abstract);

b) said authentication device decoding the received encrypted second identification information  
based on said encryption key generating information, said authentication device comparing the decoded  
5 second identification information to the second identification information stored in said second  
identification information storage means, by way of performing the authentication (Tello: abstract).

As per claims 4 and 16, the applicant describes the authentication system of claims 3 and 15,  
which are met by Tello in view of Schneier, with the following limitation:

10 a) said portable terminal is a card-shaped portable terminal issued by said service provider to  
said service user (Tello: Col 2, line 39 to Col 3, line 21);

b) said authentication device being contained in a host computer in which said service provider  
authenticates the use information by said service provider (Tello: Col 2, line 39 to Col 3, line 21);

c) said service user being authenticated by said authentication device authenticating said  
15 portable terminal and that said user is a true owner of the portable terminal (Tello: Col 2, line 39 to Col 3,  
line 21);

Neither Tello nor Schneier disclose that the portable terminal is issued to a user. The examiner  
takes official notice that a portable terminal may be issued to a user. It would have been obvious to one  
of ordinary skill in the art at the time the invention was filed to issue a portable terminal in a situation such  
20 as one where a user is a company employee.

As per claims 5 and 17, the applicant describes the authentication system of claims 4 and 16,  
which are met by Tello in view of Schneier, with the following limitation which is met by Tello:

Wherein said first and second communication means are wired or wireless communication means  
25 (Tello: Col 2, line 39 to Col 3, line 21).



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Claims 6-7,9,18-19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tello in view of Schneier in further view of Glazner (Glazner, Lon. Storing Data with the RAMPACK B. February 1999).

5           As per claims 6-7,9,18-19, and 21, the applicant describes the authentication system of claim 4 (etc), which is met by Tello in view of Schneier, with the following limitation which is met by Glazner:

Wherein said portable terminal includes transient storage means in which the second identification information is stored transiently (Glazner: page 2);

10           Tello in view of Schneier disclose all the limitations of claim 4 (etc) from which the addressed claims depend. Tello in view of Schneier do not disclose a transient storage means. Glazner discloses the transient storage means of RAM. It would have been obvious to one of ordinary skill in the art at the time the invention was filed to combine the ideas of Glazner with those of Tello in view of Schneier because RAM is an efficient transient storage means.

15           Claims 10-12,22-24, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tello in view of Schneier in further view of Lillibridge, U.S. Patent No. 6,195,698.

As per claim 46, the applicant describes an authentication system with the following limitations which are met by Tello in view of Schneier in further view of Lillibridge:

20           a) first identification information storage means having the first identification information pre-stored therein for discriminating said portable terminal (Lillibridge: Col 3, line 12 to 28, Fig 4; Tello: Col 2, line 39, to Col 3, line 21);

25           b) operating means including display means for irregularly displaying letters included in a group of letters and selection means for selecting the letters making up the second identification information from among the letters irregularly displayed on said display means, said operating means inputting the second identification information associated with said first identification information (Lillibridge: Col 3, line 12 to 28, Fig 4; Tello: Col 2, line 39, to Col 3, line 21);

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c) first communication means for communication with said authentication device (Tello: Col 2, line 39 to Col 3, line 21);

d) second identification information storage means having the first identification information and the second identification information stored therein (Lillibridge: Col 3, line 12 to 28, Fig 4; Tello: Col 2, line 39, to Col 3, line 21);

e) encryption key generating information generating means for generating said encryption key generating information (Schneier: page 173);

f) second communication means for communication with said portable terminal (Tello: Col 2, line 39 to Col 3, line 21);

g) comparator authentication means for comparing the second identification information encrypted by said encryption means to said encryption key generating information by way of authentication (Tello: Col 2, line 39 to Col 3, line 21);

h) said portable terminal encrypts the second identification information input from said operating means, based on said encryption key generating information received from said authentication device through said first communication means, and the so encrypted second identification information is transmitted through said first communication means to said authentication device, and wherein, in said authentication device, the encrypted second identification information received through said second communication means and the second identification information stored by said second identification storage means are compared to each other based on said encryption key generating information by way of performing the authentication (Tello: Col 2, line 39 to Col 3, line 21).

Tello does not disclose key generating means. Schneier discloses key generation means, such as a random-number generator for key generation. It would have been obvious to one of ordinary skill in the art to combine the ideas of Schneier with Tello because adding means to generate a key increases security for a plurality of reasons, such as allowing for the dynamic creation and use of new keys.

Tello in view of Schneier do not disclose irregularly displaying letters in a group of letters and selection means for selecting the letters making up the second identification information from the letters irregularly displayed. Lillibridge discloses this idea. It would have been obvious to one of ordinary skill in

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the art at the time the invention was filed to combine the ideas of Lillibridge with those of Tello in view of Schneier because doing so makes the system more secure by making the system less prone to an automated attack.

5           As per claims 10-12 and 22-24, the applicant describes the authentication system of claim 4 (etc), which is met by Tello in view of Schneier, with the following limitation which is met by Lillibridge:

Wherein said operating means in said portable terminal includes a plurality of input units for letters or numerical figures for inputting said second identification information, and wherein the arraying positions of said letter input units are variable (Lillibridge: Col 3, line 12 to 28, Fig 4).

10

Claims 1-9,13-21, and 35-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemirofsky, U.S. Patent No. 5,880,769, in view of Schneier.

15           As per claims 1,13, and 35, the applicant describes a portable terminal with the following limitations which are met by Nemirofsky in view of Schneier:

a) first identification information storage means having the first identification information for discriminating said portable terminal pre-stored therein (Nemirofsky: Col 4, line 50 to Col 5, line 15);

b) operating means for inputting the second identification information associated with said first identification information (Nemirofsky: Col 4, line 50 to Col 5, line 15);

20           c) communication means for communication with said authentication device (Nemirofsky: Col 4, line 50 to Col 5, line 15);

d) encrypting means for encrypting the second identification information input by said operating means based on preset encryption key generating information sent over said communication means from said authentication device (Nemirofsky: Col 4, line 50 to Col 5, line 15); Schneier: pages 176-177.

25           Nemirofsky does not disclose encrypting based on a preset encryption key received from an authentication device. Schneier discloses that a key may be transferred to an entity in order to establish secure communication. It would have been obvious to one of ordinary skill in the art at the time the

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invention was filed to combine the ideas of Schneier with those of Nemirofsky and transfer an encryption key for the purpose of establishing secure communication.

As per claims 2-7,9,14-19,21,36-40, and 42, the applicant describes the portable terminal of claim 1 (etc), which is met by Nemirofsky in view of Schneier, with the following limitations which are met by Nemirofsky:

Wherein the portable terminal is issued to said service user by a service provider to offer preset services for said service user in a credit sale system, an inter-account instant payment system and E-commerce carried out over a preset network and is in the form of a card (Nemirofsky: Col 4, line 50 to Col 5, line 15).

As per claims 8,20, and 41, the applicant describes the portable terminal of claim 4 (etc), which is met by Nemirofsky in view of Schneier, with the following limitation:

Wherein said second identification information stored in said transient storage means is erased every preset time interval;

Nemirofsky in view of Schneier disclose second identification information stored in transient storage. Nemirofsky in view of Schneier does not disclose erasing the information every preset time interval. The examiner takes official notice that the idea of erasing information every preset time interval is well-known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was filed to erase information every preset time interval in order to free memory space.

Claims 10-12,22-24, and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemirofsky in view of Schneier in further view of Lilliberg.

As per claims 10-12,22-24, and 43-46, the applicant describes describes an authentication system with the following limitations which are met by Nemirofsky in view of Schneier in further view of Lillibridge:

a) first identification information storage means having the first identification information pre-stored therein for discriminating said portable terminal (Lillibridge: Col 3, line 12 to 28, Fig 4; Nemirofsky: Col 4, line 50 to Col 5, line 15);

5 b) operating means including display means for irregularly displaying letters included in a group of letters and selection means for selecting the letters making up the second identification information from among the letters irregularly displayed on said display means, said operating means inputting the second identification information associated with said first identification information (Lillibridge: Col 3, line 12 to 28, Fig 4; Nemirofsky: Col 4, line 50 to Col 5, line 15);

10 c) first communication means for communication with said authentication device (Nemirofsky: Col 4, line 50 to Col 5, line 15);

d) second identification information storage means having the first identification information and the second identification information stored therein (Lillibridge: Col 3, line 12 to 28, Fig 4; Nemirofsky: Col 4, line 50 to Col 5, line 15);

15 e) encryption key generating information generating means for generating said encryption key generating information (Schneier: page 173);

f) second communication means for communication with said portable terminal (Nemirofsky: Col 4, line 50 to Col 5, line 15);

20 g) comparator authentication means for comparing the second identification information encrypted by said encryption means to said encryption key generating information by way of authentication (Nemirofsky: Col 4, line 50 to Col 5, line 15);

25 h) said portable terminal encrypts the second identification information input from said operating means, based on said encryption key generating information received from said authentication device through said first communication means, and the so encrypted second identification information is transmitted through said first communication means to said authentication device, and wherein, in said authentication device, the encrypted second identification information received through said second communication means and the second identification information stored by said second identification

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storage means are compared to each other based on said encryption key generating information by way of performing the authentication (Nemirofsky: Col 4, line 50 to Col 5, line 15; Schneier: pages 176-177).

Nemirofsky does not disclose all the limitations of parts e and h. More specifically, Nemirofsky does not disclose encrypting based on a preset encryption key received from an authentication device.

5 Schneier discloses that a key may be transferred to an entity in order to establish secure communication. It would have been obvious to one of ordinary skill in the art at the time the invention was filed to combine the ideas of Schneier with those of Nemirofsky and transfer an encryption key for the purpose of establishing secure communication.

Nemirofsky in view of Schneier does not disclose irregularly displaying letters in a group of letters  
10 and selection means for selecting the letters making up the second identification information from the letters irregularly displayed. Lillibridge discloses this idea. It would have been obvious to one of ordinary skill in the art at the time the invention was filed to combine the ideas of Lillibridge with those of Nemirofsky in view of Schneier because doing so makes the system more secure by making the system less prone to an automated attack.

15

### ***Conclusion***

This action is made non-final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Schubert whose telephone number is (571) 272-4239. The examiner can normally  
20 be reached on M-F 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should  
5 you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
EMMANUEL L. MOISE  
SUPERVISORY PATENT EXAMINER

KS

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